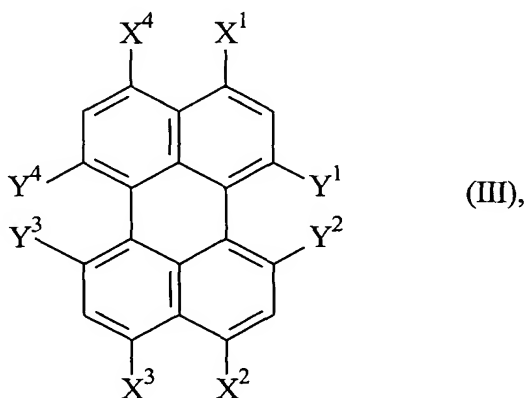


AMENDMENTS TO THE CLAIMS

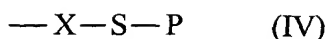
Claims 1-40 (Canceled)

Claim 41 (New): A dye-comprising aqueous polymer dispersion in which the polymer particles have an average diameter $d_z < 1000$ nm and comprise at least 0.01% by weight of at least one oil-soluble dye in molecularly disperse form and which, furthermore, is composed of at least one monoethylenically unsaturated monomer A having a water solubility > 0.01 g/l and at least one further, polymerization-active compound which is selected from

- monoethylenically unsaturated monomers B having a water solubility < 0.01 g/l,
- monomers C which have at least two nonconjugated, ethylenically unsaturated double bonds,
- crosslinking monomers D, and
- copolymerizable dyes having at least one copolymerizable, ethylenically unsaturated double bond which does not belong to the chromophore of the dye or a perylene dye represented by formula III:



in which one or two of the groups X^1 to X^4 , Y^1 to Y^4 is or are a radical of the formula IV



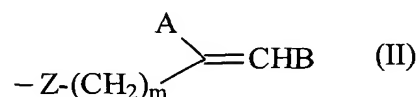
in which

X is selected from a single bond, ethynylene or $-(CH_2)_k-X'$ where $k = 0, 1, 2, 3$ or 4 and X' is selected from $-O-$; $-N(R)-$; $-S-$; $-O-C(O)-$; $-O-C(O)-O-$; $-O-C(O)-NR'-$; $-N(R')-C(O)-$; $-N(R')-C(O)-O-$; $-N(R')-C(O)-N(R'')-$; $-C(O)-$; $-C(O)-O-$; $-C(O)-N(R')-$; $-S(O)_2-O-$; $-S(O)_2-NR'-$; $-O-S(O)_2-$; $-N(R')-S(O)_2-$;

in which R is hydrogen, linear or branched C_1-C_6 -alkyl, aryl, aryl- C_1-C_6 -alkyl, C_1-C_6 -alkylcarbonyl, arylcarbonyl or formyl and R' , R'' independently of one another are hydrogen, linear or branched C_1-C_6 -alkyl, aryl or aryl- C_1-C_6 -alkyl which are optionally substituted by OH, halogen, C_1-C_4 -alkyl or C_1-C_4 -alkyloxy,

S is selected from a single bond, C_1-C_{12} -alkylene which can be interrupted by one or more nonadjacent oxygen atoms, sulfur atoms or (alkyl)imino groups, or is 1,2-, 1,3- or 1,4-phenylene which optionally has one or two substituents selected from C_1-C_4 -alkyl, C_1-C_4 -alkyloxy or halogen, or is 1,2-, 1,3- or 1,4-xylylene which is optionally substituted as for said phenylene, and

P is a polymerizable group of the formula II:



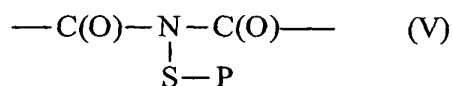
in which

A and B independently of one another are hydrogen, C_1-C_6 -alkyl or phenyl, or A and B together with the double bond to which they are attached form a cyclopentene or cyclohexene ring,

m is 0, 1, 2 or 3, and

Z is a single bond or possesses one of the definitions indicated above for X', or

X¹ together with X⁴ and/or X² together with X³ are a group of the formula V:



in which S and P are as defined above, and

the remaining groups X¹ to X⁴, Y¹ to Y⁴ independently of one another are selected from hydrogen, linear or branched C₁-C₁₂-alkyl which can optionally be interrupted by one or more nonadjacent oxygen atoms, sulfur atoms or by (alkyl)imino groups and/or can be substituted by OH and/or halogen, or are cycloalkyl, heterocycloalkyl, aryl, hetaryl, aryl-C₁-C₆-alkyl, hetaryl-C₁-C₆-alkyl, C₂-C₁₈-alkynyl, arylethynyl, tris(C₁-C₄-alkyl)silylethynyl, cyano, nitro, halogen;

and/or atomic groups selected from: -O-R; -O-C(O)-R'; -N(R')-C(O)-R"; -NRR'; -C(O)-R; -C(O)-OR'; -C(O)-NR'R"; -N(R')-C(O)-OR; -N(R')C(O)-NR'R", -O-S(O)₂-R, -N(R')-S(O)₂-R", in which R, R' and R" are as defined above,

the remaining groups X¹ together with X⁴ and/or X² together with X³ can furthermore be -X"-C(O)-, -C(O)-N(R''')-C(O)- or -C(O)-O-C(O)-, in which R''' has the definitions indicated for R' and X" is -CH=CH-, 1,2-phenylene, 1,2-naphthylene, 2,3-naphthylene or 2,3-pyridinylene, each of which is unsubstituted or substituted once or twice by C₁-C₄-alkylene, C₁-C₄-alkoxy or halogen, except for those dye-comprising aqueous polymer dispersions which contain up to 3% by weight, based on the polymer matrix, of a polycyclic aromatic hydrocarbon, selected from naphthalene, anthracene and their substituted aromatic derivatives.

Claim 42 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 41, wherein the polymeric matrix formed from the copolymerized monomers A, B and, optionally, C and D is composed of

- from 50 to 99.5% by weight of monomers A,
- from 0.5 to 50% by weight of monomers B,
- from 0 to 30% by weight of monomers C, and
- from 0 to 30% by weight of monomers D.

Claim 43 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 41, comprising at least one noncopolymerizable dye, wherein the polymer matrix comprises, in copolymerized form, at least one compound selected from the monomers C and the compounds D, in amounts of > 0.1% by weight, based on the polymer matrix.

Claim 44 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 41, comprising at least one copolymerizable oil-soluble dye having at least one copolymerizable, ethylenically unsaturated double bond which does not belong to the chromophore of the dye.

Claim 45 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 41, wherein the polymer particles have a monomodal particle size distribution with an average particle diameter d_z in the range from 100 to 400 nm.

Claim 46 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 41, wherein the monomers A copolymerized in the polymer particles comprise

- from 0.5 to 30% by weight of at least one monomer A1 having a water solubility > 60 g/l (at 25°C and 1 atm), based on the total monomer amount, and
- from 70 to 99.5% by weight of at least one monomer A2 having a water solubility < 60 g/l (at 25°C and 1 atm), based on the total monomer amount.

Claim 47 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 46, wherein the monomers A2 are selected from monoethylenically unsaturated cationic monomers.

Claim 48 (New): A dye-comprising aqueous polymer dispersion as claimed in claim 46, wherein the monomers A2 are selected from monoethylenically unsaturated monomers which have at least one acid group, optionally in deprotonated form.

Claim 49 (New): A dye-comprising polymer powder obtained by drying an aqueous polymer dispersion as claimed in claim 41.

Claim 50 (New): An aqueous dye-comprising formulation comprising:

- i) at least one dye-comprising polymer which is present in the formulation in the form of dispersed polymer particles and is selected from the polymers present in the aqueous, dye-comprising polymer dispersion as claimed in claim 41, and the polymer powder as claimed in claim 49, and
- ii) customary auxiliaries.

Claim 51 (New): A formulation as claimed in claim 50, additionally comprising at least one water-soluble polymer PW.

Claim 52 (New): A formulation as claimed in claim 51, wherein the polymer PW has cationic groups.

Claim 53 (New): A formulation as claimed in claim 52, wherein the polymer PW is a copolymer which is composed of at least one monoethylenically unsaturated, cationic monomer, especially a monomer having at least one quaternary ammonium or immonium group, and at least one further, neutral monomer.

Claim 54 (New): A formulation as claimed in claim 53, wherein the polymer PW is selected from:

- copolymers of 1-vinylpyrrolidone with 1-vinyl-3-alkylimidazolium salts,
- copolymers of 1-vinylpyrrolidone with methacryloyloxyethyltrialkylammonium salts,
- terpolymers of vinylpyrrolidone and vinylcaprolactam with 1-vinyl-3-alkylimidazolium salts.

Claim 55 (New): A formulation as claimed in claim 51, wherein the polymer PW has acidic functional groups and/or anionic functional groups.

Claim 56 (New): A formulation as claimed in claim 55, wherein the polymer PW is a copolymer composed of

- at least one monoethylenically unsaturated monomer MA selected from monomers having at least one acid group and salts thereof, and
- at least one further, neutral monomer.

Claim 57 (New): A formulation as claimed in claim 55, wherein the polymer PW is selected from

- homopolymers and copolymers of 2-acrylamido-2-methylpropanesulfonic acid, copolymers of acrylic acid and/or of methacrylic acid with styrene,
- copolymers of acrylic acid and/or of methacrylic acid with C₁-C₁₀-alkyl esters of acrylic acid and/or of methacrylic acid,
- copolymers of maleic acid or of maleic anhydride with olefins, especially with diisobutene,
- the formaldehyde condensates of an arylsulfonic acid, especially a naphthalenesulfonic acid and salts thereof.

Claim 58 (New): A dye-comprising formulation as claimed in claim 50, which is an ink, especially for the inkjet process.

Claim 59 (New): An aqueous pigmented formulation comprising

- i) at least one dye-comprising polymer which is present in the formulation in the form of dispersed polymer particles and is selected from the polymers of the aqueous dye-comprising polymer dispersion as claimed in claim 41 and from the polymer powder as claimed in claim 49, and whose oil-soluble dye comprises at least one optical brightener,
- ii) at least one dye-free, film-forming water-insoluble polymer which is composed of ethylenically unsaturated monomers, in the form of its aqueous dispersion,
- iii) at least one inorganic white pigment alone or together with an inorganic filler, and
- iv) auxiliaries.

Claim 60 (New): A formulation as claimed in claim 59, the formulation being a paper coating slip.